

AMENDMENTS TO THE CLAIMS

Claim 1. (currently amended) A method of watermarking and transferring watermarked material in a system comprising a transaction server, first and second clients, first apparatus for applying a perceptible watermark to the material and second apparatus for removing the watermark; the method comprising the steps of:

transferring from the transaction server to the first apparatus (i) data for creating a watermark, the creating data including (a) data defining an invertible algorithm and (b) data for creating at least one security key associated with the algorithm and (ii) data for creating a material identifier;

using the said first apparatus to apply a material identifier to the material and ~~applying~~
to apply a perceptible watermark to the material, using the said creating data in accordance with
an invertible algorithm, the perceptible watermark being applied to the material as part of a
compression of the material, the invertible algorithm providing a perceivable impairment to the
material;

transferring from the first client to the transaction server the said material identifier and data for inverting the algorithm including the said at least one key;

transferring the watermarked material to the second ~~apparatus~~client;

deriving the said material identifier from the material;

transferring the identifier from the second client to the transaction server;

subject to predetermined conditions being satisfied, transferring from the transaction server to the second apparatus watermark removal data associated with the said material identifier, the removal data including at least one key and data defining an algorithm for removing the watermark in conjunction with the key; and

using the second apparatus to remove the perceivable watermark using the said removal data, to remove the perceivable impairment from the material.

Claim 2. (original) A method according to claim 1, wherein the first apparatus compresses the material and applies the watermark as part of the compression process.

Claim 3. (original) A method according to claim 1, wherein the said data defining the invertible algorithm comprises algorithm configuration data.

Claim 4. (original) A method according to claim 1, wherein the said data defining the invertible algorithm comprises the algorithm.

Claim 5. (original) A method according to claim 1, wherein data for creating the material identifier is stored in a data carrier for transfer to the first apparatus.

Claim 6. (original) A method according to claim 1, wherein the said data for creating a watermark is stored in a data carrier for transfer to the first apparatus.

Claim 7. (original) A method according to claim 6, wherein a material identifier and at least one key are generated during the application of the watermark to the material, and comprising the step of storing the generated identifier and key on a data carrier for transfer to the first client for transfer to the transaction server.

Claim 8. (original) A method according to claim 1, comprising the step of storing in the transaction server metadata relating the said watermarked material, the metadata being referenced by the said identifier.

Claim 9. (original) A method according to claim 1, wherein the said removal data is stored in a data carrier for transfer to the second apparatus.

Claim 10. (original) A method according to claim 1, comprising storing on the transaction server conditions of sale of unwatermarked material.

Claim 11. (original) A method according to claim 10, comprising the step of transferring the said conditions of sale from the first client to the transaction server.

Claim 12. (original) A method according to claim 10, wherein the transaction server transfers the said removal data subject to the condition that a buyer has fulfilled the conditions of sale.

Claim 13. (original) A method according to claim 1, comprising the step of storing the watermarked material in a recording medium and transferring the watermarked material to the second apparatus on the recording medium.

Claim 14. (currently amended) A data carrier ~~in which is~~ for use in the method of claim 1, the data carrier having stored therein (i) data for creating a perceptible watermark, the creating

data including (a) data defining an invertible algorithm for applying a perceptible watermark to material, the perceptible watermark being applied to the material as part of a compression of the material, the invertible algorithm providing a perceivable impairment to the material and (b) data for creating at least one security key associated with the algorithm and (ii) data for creating a material identifier.

Claim 15. (original) A data carrier according to claim 14, wherein the carrier is a smart card comprises a processor and memory and the processor is programmed to implement the said algorithm.

Claim 16. (original) A data carrier according to claim 14, wherein the carrier is a smart card comprises memory storing algorithm configuration data defining the invertible algorithm.

Claim 17. (original) A data carrier in which is stored watermark removal data including at least one key and data defining an algorithm for removing a watermark in conjunction with the key.

Claim 18. (original) A data carrier according to claim 17, wherein the carrier is a smart card comprises a processor and memory and the processor is programmed to implement the said algorithm.

Claim 19. (original) A data carrier according to claim 17, wherein the carrier is a smart card comprises memory storing algorithm configuration data defining the invertible algorithm.

Claim 20. (original) A system comprising a transaction server, first and second clients, first apparatus for applying a perceptible watermark to the material and second apparatus for removing the watermark, the said first and second clients, first apparatus for applying a perceptible watermark to the material and second apparatus for removing the watermark being linked by one or more communications networks; the system being arranged to implement the method of claim 1.

Claim 21. (original) A system according to claim 20, wherein the said material is video material.

Claim 22. (previously presented) A system according to claim 20, wherein the said material is audio/visual material.

Claim 23. (previously presented) A system according to claim 20, wherein the said material is audio material.

Claim 24. (original) A system according to claim 20, wherein the said material is data material.

Claim 25. (currently amended) A data processing apparatus forming the first apparatus of the system according to claim 20, comprising

an information material processing apparatus operable to receive signals representative of information material, and to adapt said signals to the effect of introducing a reversible modification to said information material in accordance with a modification key, said modification being arranged to provide a disturbing effect on the information material to a human recipient by compressing the information material to provide the disturbing effect in accordance with an invertible algorithm,

a data generation processor operable to generate data identifying said information material,

a recording apparatus operable to record said adapted signals and said identifying data on a recording/reproducing medium, and

a data processor operable to receive said identifying data and said modification key and to store said identifying data and data representative of said modification key data on a data carrier.

Claim 26. (original) An apparatus as claimed in claim 25, wherein said recording/reproducing medium is a linear recording medium including capacity for ancillary data, and said identifying data is recorded in said capacity for recording ancillary data.

Claim 27. (original) An apparatus as claimed in claim 25, wherein said data carrier is a hand insertable carrier.

Claim 28. (original) An apparatus as claimed in claim 27, wherein said data carrier is a smart card or the like.

Claim 29. (original) An apparatus as claimed in claim 25, wherein said identifying data is a Unique Material Identifier or the like.

Claim 30. (original) An apparatus as claimed of claim 25, said apparatus comprising an information material server arranged to store signals representative of information material, and to retrieve selected signals representative of selected information material items, said information material processing apparatus being operable to adapt said selected signals, said data generation processor being operable to generate said data identifying said selected information material signals.

Claim 31. (original) A camera comprising the apparatus according to claim 25.

Claim 32. (currently amended) An apparatus for receiving a data carrier according to claim 14, having data stored by the apparatus according to claim 25, said apparatus comprising
a data reading processor operable to receive said data carrier via hand insertion by a user
and to read the modification key and the identifying data, and
a communications processor operable to communicate said modification key and said identifying data to a data base processor.

Claim 33. (original) An apparatus as claimed in claim 32, wherein said communications processor is operable to communicate said modification key and said identifying data to said data base processor via a communications network.

Claim 34. (original) An apparatus as claimed in claim 33, wherein said communications network is the Internet.

Claim 35. (original) An apparatus as claimed in claim 32, wherein said communications processor is operable to receive data representative of sales conditions and price information and to communicate said sales conditions and said price information with said modification key data and said identifying data to said data base processor.

Claim 36. (original) A signal bearing the modification key and the identifying data generated by the apparatus according to claim 32.

Claim 37. (canceled)

Claim 38. (currently amended) A method comprising the steps of:

applying, using a watermarking apparatus, a removable perceptible watermark to material, the watermark being removable using removal data created during application of the watermark and applying identifying data to the material to identify the watermarked material;

registering with a transaction server conditions for the removal of the watermark and identifying data identifying the watermarked material;

transferring the watermarked material to a watermark removal apparatus; and

identifying to the transaction server the transferred material, and transferring the removal data to the removal apparatus to allow removal of the perceivable watermark if the transaction

server indicates that predetermined conditions for removal are satisfied, wherein the watermark is applied using an invertible algorithm, and the perceptible watermark being applied to the material as part of a compression of the material, the invertible algorithm providing a perceivable impairment to the material.

Claim 39. (original) A method according to claim 38, wherein the said conditions are conditions of sale of the material.

Claim 40. (original) A method according to claim 39 wherein the conditions of sale include paying for the material.

Claim 41. (original) A method according to claim 38, comprising the step of using a first client linked to the transaction server by a communications network to register the said conditions.

Claim 42. (original) A method according to claim 41, comprising the step of using a second client linked to the transaction server by a communications network to comply with the said conditions.

Claim 43. (original) A method according to claim 38, comprising the steps of loading the removal data onto a data carrier and transferring the carrier to the removal apparatus when the said conditions are satisfied.

Claim 44. (original) A method according to claim 43, wherein the removal data is downloaded onto the data carrier from the transaction server via the communications network.

Claim 45. (original) A method according to claim 44, wherein the data carrier is a smart card.

Claim 46. (original) A system comprising a watermarking apparatus, a transaction server and a watermark removal apparatus arranged to carry out the method of claim 38.

Claim 47. (currently amended) A server arranged to:

a) receive and store data identifying watermarked material, data enabling removal of the watermarks from material and data setting predetermined conditions for the removal of watermarks; and

b) receive identifying data identifying watermarked material from which a watermark is to be removed;

c) monitor whether the predetermined conditions are satisfied; and

d) if the conditions are satisfied, providing the removal data for transfer to apparatus for removal of the ~~watermark~~perceivable watermark, wherein the watermarks are applied to the material using an invertible algorithm, the watermark being perceptible, and the data enabling removal of the watermarks identifies the invertible algorithm, the perceptible watermark being applied to the material as part of the compression of the material, the invertible algorithm providing a perceivable impairment to the material.

Claim 48. (original) A server according to claim 47, wherein the said predetermined conditions are conditions of sale of the material.

Claim 49. (original) A server according to claim 48, arranged to receive and store financial data relating to the sellers of the watermarked material.

Claim 50. (original) A server according to claim 48, arranged to receive and store financial data relating to buyers of the watermarked material.

Claim 51. (original) A server according to claim 48, wherein the said conditions of sale include paying for the material.

Claim 52. (original) A server according to claim 51, wherein the server is arranged to monitor transfer of money from the buyer to the seller.

Claim 53. (original) A server according to claim 52, which is linked by a communications network with a financial institution to monitor the said transfer of money.

Claim 54. (original) A server according to claim 47, wherein the removal data includes a template and a security key.

Claims 55-66. (canceled)

Claim 67. (currently amended) A signal comprising watermark removal data including a key and an invertible algorithm or data for configuring an algorithm a removal algorithm, the watermark being perceptible and reversible, the removal data identifying the invertible algorithm, the perceptible watermark being applied to the material as part of a compression of the material, the invertible algorithm providing a perceivable impairment to the material.

Claim 68. (original) A signal according to claim 67, further including a watermark template.

Claim 69. (previously presented) A signal ensemble comprising a signal according to claim 67 and a separate signal including the watermarked material.

Claim 70. (currently amended) A method comprising the steps of:
applying to material a perceptible reversible watermark in accordance with an invertible algorithm;

receiving, via a first channel, the watermarked material ~~which is watermarked with a watermark which is reversible;~~ and

receiving, via a second channel, removal data which enables the removal of the watermark.

Claims 71-72. (canceled)

Claim 73. (original) A computer program product arranged to implement the method of claim 1 when run on a system comprising a transaction server, first and second clients, first apparatus for applying a perceptible watermark to the material and second apparatus for removing the watermark.

Claim 74. (currently amended) A method of watermarking and transferring watermarked material in a system comprising a transaction server and at least first and second clients, the method comprising the steps of:

using the first client to (i) create a watermark, defined by (a) an invertible algorithm and (b) at least one security key associated with the algorithm and (ii) provide a material identifier;

using the said first client to associate the material identifier with the material and apply the watermark to the material in accordance with an invertible algorithm, the watermark being perceptible in the material, the perceptible watermark being applied to the material as part of a compression of the material, the invertible algorithm providing a perceivable impairment to the material; and

storing, in the transaction server, the said material identifier and data for inverting the algorithm including the said at least one key;

transferring the watermarked material to the second client;

deriving the said material identifier associated with the material;

transferring the identifier from the second client to the transaction server;

subject to predetermined conditions being satisfied, transferring from the transaction server to the second client watermark removal data associated with the said material identifier,

the removal data including at least one key and data defining an algorithm for removing the watermark in conjunction with the key; and

using the second client to remove the perceivable watermark using the said removal data.

Claim 75. (original) A method according to claim 74, wherein the watermarked material is transferred to the second client via a communications channel.

Claim 76. (original) A method according to claim 74, comprising the step of storing in the transaction server metadata relating the said watermarked material, the metadata being referenced to the material by the said identifier.

Claim 77. (original) A method according to claim 74, comprising storing on the transaction server financial rules relating to use of the material.

Claim 78. (original) A method according to claim 77, wherein the financial rules are referenced to the material by the said identifier.

Claim 79. (original) A method according to claim 74, comprising storing on the transaction server business rules relating to use of the material.

Claim 80. (original) A method according to claim 74, comprising storing on the transaction server statistical data relating to transactions associated with the material.

Claim 81. (original) A method according to claim 74, comprising creating at the transaction server files associated with respective items of material which users have been allowed to use by virtue of a business transaction.

Claim 82. (original) A method according to claim 81, each file containing data relating to the rules of the business transaction.

Claim 83. (original) A method according to claim 81, wherein each file contains metadata relating to the item of material.

Claim 84. (original) A method according to claim 81, wherein each file contains the removal data.

Claim 85. (original) A method according to claim 84 wherein the removal data is secured against unauthorized access thereto.

Claim 86. (original) A method according to claim 81, wherein the transaction server transfers the said file to the second client.

Claim 87. (original) A method according to claim 85, wherein the step of transferring removal data comprises transferring the said file to the second client.

Claim 88. (original) A method according to claim 74, comprising the step of storing the watermarked material in a recording medium and transferring the watermarked material to the second client on the recording medium.

Claim 89. (original) A method according to claim 74, wherein the first client downloads watermark creation software from the server to create a watermark off-line.

Claim 90. (original) A method according to claim 74, wherein the first client interacts with the transaction server to create the watermark.

Claim 91. (original) A system comprising a transaction server and first and second clients, the system being arranged to implement the method of claim 74.

Claim 92. (previously presented) A method or system according to claim 74, wherein the said material is video material.

Claim 93. (original) A method or system according to claim 74, wherein the said material is audio/visual material.

Claim 94. (original) A method or system according to claim 74 wherein the said material is audio material.

Claim 95. (original) A method or system according to claim 74, wherein the said material is data material.

Claim 96. (original) A suite of computer programs containing instructions which when run on a system comprising a server and first and second clients configures the system to operate according to the method of claim 74.

Claim 97. (currently amended) A method of watermarking material and transferring the watermarked material in a system comprising at least one first processor, a plurality of second processors, and a communications network for transferring the watermarked material from the at least one first processor to one or more second processors, the method comprising the steps of:

using the first processor to apply a perceptible watermark to material in accordance with an invertible algorithm, the perceptible watermark being applied to the material as part of a compression of the material, the invertible algorithm providing a perceivable impairment to the material;

using the communications network in push mode to transfer the watermarked material from the first processor to the one or more second processors;

subject to predetermined conditions being satisfied, transferring to the second processor watermark removal data; and

using the second processor to remove the perceivable watermark using the said removal data.

Claim 98. (previously presented) A method according to claim 97 wherein the communications network is an electronic communications network.

Claim 99. (previously presented) A method according to claim 97, wherein the removal data is secured against unauthorized access thereto.

Claim 100. (previously presented) A method according to claim 97, wherein the removal data is secured against unauthorized modification thereto.

Claim 101. (previously presented) A method according to claim 97, wherein the second processor is linked by a network to other processors.

Claim 102. (previously presented) A method according to claim 101 wherein the other processors are operable to access material stored in the first processor.

Claim 103. (previously presented) A system comprising a transaction server and first and second client processors, the system being arranged to implement the method of claim 97.

Claim 104. (previously presented) A method according to claim 97, wherein the material is video material.

Claim 105. (previously presented) A method according to claim 97, wherein the material is audio/visual material.

Claim 106. (previously presented) A method according to claim 97 wherein the material is audio material.

Claim 107. (previously presented) A method according to claim 97, wherein the material is data material.

Claim 108. (previously presented) A suite of computer programs containing instructions which, when run on a system comprising a server and first and second client processors, configures the system to operate according to the method of claim 103.

Claim 109. (previously presented) A suite of computer programs containing instructions which, when run on a system comprising the first and second processors configures the system to operate according to the method of claim 97.

Claim 110. (currently amended) A method of watermarking and transferring watermarked material in a system comprising at least one first processor, a plurality of second processors, and a communications network for transferring the watermarked material from the at least one first processor to one or more second processors, the method comprising the steps of using the first processor to (i) create a perceptible watermark, defined by (a) an invertible algorithm and (b) at least one security key associated with the algorithm and (ii) provide a material identifier;

using said first processor to associate the material identifier with the material and apply the perceptible watermark to the material in accordance with an invertible algorithm, the perceptible watermark being applied to the material as part of a compression of the material, the invertible algorithm providing a perceivable impairment to the material;

storing said material identifier and data for inverting the algorithm including the said at least one key;

using the communications network to transfer in push-mode the watermarked material from the at least one first processor to the plurality of second processors;

subject to predetermined conditions being satisfied, transferring to the second processor watermark removal data associated with said material identifier, the removal data including at least one key and data defining an algorithm for removing the watermark in conjunction with the key; and

using the second processor to remove the perceptible watermark using the said removal data.

Claim 111. (previously presented) A method according to claim 110, wherein the watermarked material is transferred to the second processor via an electronic communications link.

Claim 112. (previously presented) A method according to claim 110, further comprising the step of storing metadata relating said watermarked material, the metadata being referenced to the material by said identifier.

Claim 113. (previously presented) A method according to claim 112, further comprising the step of storing material in the second processor in dependence on metadata associated with the material.

Claim 114. (previously presented) A method according to claim 110, further comprising storing financial rules relating to use of the material.

Claim 115. (previously presented) A method according to claim 114, further wherein the financial rules are referenced to the material by said identifier.

Claim 116. (previously presented) A method according to claim 110, further comprising storing business rules relating to use of the material.

Claim 117. (previously presented) A method according to claim 110, further comprising storing statistical data relating to transactions associated with the material.

Claim 118. (previously presented) A method according to claim 110 wherein the removal data is secured against unauthorized access thereto.

Claim 119. (previously presented) A method according to claim 110 wherein the removal data is secured against unauthorized modification thereto.

Claim 120. (previously presented) A system comprising a transaction server and first and second processors, the system being arranged to implement the method of claim 110.

Claim 121. (previously presented) A method according to claim 110, wherein the material is video material.

Claim 122. (previously presented) A method according to claim 110, wherein the material is audio/visual material.

Claim 123. (previously presented) A method according to claim 110, wherein the material is audio material.

Claim 124. (previously presented) A method according to claim 110, wherein the material is data material.

Claim 125. (previously presented) A suite of computer programs containing instructions which when run on a system comprising first and second processors configures the system to operate according to the method of claim 110.